

REMARKS

In response to the Office Action dated December 29, 2004, Applicants respectfully request reconsideration based on the above claim amendment and the following remarks. Applicants respectfully submit that the claims as presented are in condition for allowance.

INTERVIEW SUMMARY

On February 25, 2005, Applicants conducted a telephonic interview with Examiner Pham. During the interview possible claim amendments were discussed. Applicants thank Examiner Pham for conducting the telephonic interview and for her continued consideration of the present application.

REJECTIONS

Claims 1-29 are pending in the present application. Claims 1-29 have been rejected. Claims 1, 12, 25, and 29 have been amended. No new matter has been added.

Claims 1-8, 12-14, and 18-24 are rejected under 35 U.S.C. § 102(e) as being anticipated by Von Hammerstein (U.S. Patent No. 6,278,708). Claims 1, 4, 7, 12, 15, and 17 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Chui (U.S. Patent No. 6,707,799). Claims 9 and 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chui in view of Connery (U.S. Patent No. 5,937,169). Claim 11 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chui in view of Berl (U.S. Patent No. 5,991,302). Claim 16 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chui in view of McConnell (U.S. Patent No. 6,108,307). Claims 25-29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over McConnell. It is respectfully submitted that claims 1-29 are allowable over the art of record for the reasons set forth below.

According to exemplary embodiments, data packets are prioritized in a network. A plurality of service classes for data packets are created. The network comprises a plurality of managed network elements, with each element divided into a plurality of element instances. Each of the element instances corresponds to one of the services classes, with each element instance handling packets of the same class. When a packet is first received by one of the managed network elements, its associated service class is determined. Once the service class

is determined, the packet is forwarded to the associated element instance at the next network element. Packets received at each managed network element are prioritized based on their service class. Element instances that handle the same class of packet are connected together using permanent virtual circuits (PVCs).

Claim 1 (as amended), for example, recites:

A method for providing a plurality of service classes in a network for transporting a data packet, the data packet to be afforded one of the plurality of service classes, the network comprising a plurality of managed elements connected to each other via a plurality of communication links, comprising:
partitioning each managed element into a plurality of element instances;
engineering each element instance of a given managed element to provide one of the service classes, **wherein the element instances are connected to element instances that provide the same service class via permanent virtual circuits**; and
handling the data packet at each managed element with the element instance corresponding to the service class of the data packet.

Independent claims 12, 25, and 29 recite similar features.

Von Hammerstein describes a system for avoiding LMI status interference with voice frames by reducing the number of PVCs carried by a frame relay network while maintaining the number of LAN stations that can be recorded (Von Hammerstein, col. 6, ll. 44-49). The number of PVCs carried by the network are reduced by sub-multiplexing PVCs that carry bursty data under a shared DLCI (Id. col. 6, ll. 49-52). Von Hammerstein neither describes or suggests partitioning each managed element into a plurality of element instances engineering each element instance of a given managed element to provide one of the service classes, **wherein the element instances are connected to element instances that provide the same service class via permanent virtual circuits**, and handling the data packet at each managed element with the element instance corresponding to the service class of the data packet as recited in claim 1. Von Hammerstein actually teaches against the use of PVCs. Von Hammerstein teaches reducing “the cost of frame relay network access by *reducing* the number of PVCs carried by a frame relay network while maintaining the number of LAN station connections that can be supported” (Von Hammerstein, col. 6, ll. 47-50). As described

in the application, each element instance type is associated with a PVC (Application, ¶ 14), thus increasing the number of PVCs.

Because Von Hammerstein fails to disclose or suggest all the features recited in claim 1, Applicant respectfully requests that the Examiner withdraw the 35 U.S.C. § 102(e) rejection and allow claim 1. As claim 12 recites similar features as claim 1, Applicants respectfully request withdrawal of the rejection of claim 12 as well.

Claims 2-8, 13-14, and 18-24, are all variously dependent on independent claims 1 and 12, and are therefore patentable for at least the reasons given for the independent claims. Applicants respectfully request that the Examiner withdraw the 35 U.S.C. § 102(e) rejections and allow claims 2-8, 13-14, and 18-24.

Claims 1, 4, 7, 12, 15, and 17 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Chui. Chui describes a frame relay fragmentation control protocol and system for enabling frame relay access devices and switches to support real-time traffic (Chui, col. 1, ll. 50-53). The system enables communicating peers to negotiate dynamically for fragmentation operation and configuration parameters, as well as operation termination (Id. col. 1, ll. 53-59).

Chui neither describes or suggests partitioning each managed element into a plurality of element instances, engineering each element instance of a given managed element to provide one of the service classes, **wherein the element instances are connected to element instances that provide the same service class via permanent virtual circuits**, and handling the data packet at each managed element with the element instance corresponding to the service class of the data packet as recited in claim 1. There is no mention of connecting element instances of the same class via PVCs anywhere in Chui. It is therefore respectfully requested that the Examiner withdraw the rejection and allow claim 1. As claim 12 recites similar features as claim 1, it is further requested that the Examiner withdraw the rejection and allow claim 12.

Claims 4, 7, 15, and 17, are all variously dependent on independent claims 1 and 12, and are therefore allowable for at least the reasons given with respect to claims 1 and 12. It is therefore respectfully requested that the Examiner withdraw the rejections and allow claims 4, 7, 15, and 17.

Claims 8 and 9 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chui in view of Connery. Claims 8 and 9 are dependent on claim 1 and are patentable for the reasons set forth above. Applicants respectfully submit that Connery fails to cure the deficiencies of Chui. Connery describes a method for sending data from a source executing a protocol, such as TCP/IP, and generating packet control data according to the network protocol (Connery, col. 2, ll. 46-49). The network protocol defines a large datagram from the data source, including generating a packet control data template and supplying a data payload (Id., col. 2, ll. 52-55). A plurality of data packets are generated from the datagram (Id., col. 2, ll. 55-57). There is no teaching anywhere in Connery of the features noted above that are missing in Chui. It is therefore respectfully requested that the Examiner withdraw the rejections and allow claims 8 and 9.

Claim 11 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chui in view of Berl. Claim 11 is dependent on claim 1 and is patentable for at least the reasons set forth above with respect to Chui. Applicants respectfully submit that Berl fails to cure the deficiencies of Chui. Berl describes a method for maintaining priority of packets over a heterogeneous network by a hybrid node connected to the network (Berl, col. 5, ll. 60-63). The node assigns each packet a transmission priority level as it traverses protocol layers of a communications stack of the node (Id., col. 5, ll. 63-65). An API provides a tagging mechanism to convey the transmission priority level of packets from higher layers of the stack to lower levels (Id., col. 5, ll. 65-68). There is no teaching anywhere in Berl of the features of claim 1 missing from Chui. It is therefore respectfully requested that the Examiner withdraw the rejections and allow claim 11.

Claim 16 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chui in view of McConnell. Applicants respectfully submit that McConnell fails to cure the deficiencies of Chui. McConnell describes a message server apparatus comprising an input port for receiving messages and a plurality of queues for storing the messages, wherein each queue corresponding to one of a plurality of priority levels (McConnell, col. 2, ll. 33-39). In addition, each queue has an associated congestion level associated with the number of messages waiting in the queue. (Id., col. 2, ll. 42-44). Messages are taken out of the queues by a server based on the priority level of the queues and the congestion level associated with each queue (Id., col. 2, ll. 45-60). There is no teaching anywhere in McConnell of The

features of claim 12 missing from Chui. Thus, It is therefore respectfully requested that the Examiner withdraw the rejection and allow claim 16.

Claims 25-29 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over McConnell. Independent claims 25 and 29 contain features not taught by McConnell. Specifically, McConnell fails to element resources being partitioned into a plurality of element instances, each element instance being engineered to provide one of the service classes, wherein the element instances are connected to one another via permanent virtual circuits as set forth in claims 25 and 29. It is therefore respectfully requested that the Examiner withdraw the rejections and allow claims 25 and 29.

Dependent claims 26-28 are dependent on claim 25 and are therefore allowable for at least the reasons given for claim 25. It is respectfully requested that the Examiner withdraw the rejection and allow claims 26-28.

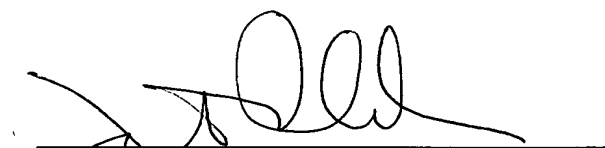
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PATENT

CONCLUSION

In view of the above amendments and remarks, Applicants respectfully submit that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested.

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